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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **YAMANE, Takeshi**

Group Art Unit: 1714

Serial No.: 09/867,565

Examiner: **Katarzyna I. Wyrozeb**

Filed: May 31, 2001

P.T.O. Confirmation No.: 7576

For: **PROCESS FOR PRODUCING FRICTION MATERIAL AND FRICTION
MATERIAL OBTAINED BY THE PROCESS**

RESPONSE UNDER 37 CFR §1.116

- EXPEDITED RESPONSE -

GROUP ART UNIT 1714

MAILSTOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Sir:

October 2, 2003

In response to the Office Action dated **July 2, 2003**, please amend the above-identified
application as follows:



MARKED UP VERSION

SUBSTITUTE SPECIFICATION

PROCESS FOR PRODUCING FRICTION MATERIAL AND FRICTION
MATERIAL OBTAINED BY THE PROCESS

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BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a process for producing a friction material, and, particularly to a process for producing a friction material used in, for example, brakes of trucks, cars or the like and to a friction material obtained by this process.

Description of the Related Art

Conventionally, a friction material for brakes of vehicles is usually obtained by binding 5 to 20 ingredients of raw material by using a thermosetting resin. An example of the process will be shown below.

1. Raw materials are compounded in the ratios to be specified and the compounded raw materials are mixed using a known mixer, such as a Henschel mixer, Leodigemixer, Eirich mixer, Banbury mixer, kneader or V-type blender, which has a blade rotating at high speed while opening fibrous materials to obtain a mixture.
2. The sufficiently blended mixture is molded under heating and pressure.
3. Thereafter, the molded product is after-cured depending on the requirement to obtain a friction material.
4. Further, depending on the requirement, only the surface of the friction material is heat-treated at high

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